

Claims

1. A method of reducing performance degradation due to hydrogen starvation of a fuel cell power plant providing electrical power to a load, comprising:

5 providing fuel reactant gas to fuel reactant gas flow fields of the fuel cell power plant;

purging to ambient, at least periodically, at least a small amount of partially depleted fuel reactant gas exiting from said flow fields;

10 sensing the direction of flow of gas between said flow fields and ambient; and

disconnecting the electrical load from the fuel cell stack in the event that there is no flow of gas from said flow fields toward ambient.

2. Apparatus for reducing performance degradation due to hydrogen starvation of a fuel cell power plant providing electrical power to a load, comprising:

5 a fuel cell power plant having fuel reactant gas flow fields;
means for providing fuel reactant gas to said flow fields;
means for purging at least periodically, at least a small amount of partially depleted fuel reactant gas exiting from said flow fields;

10 means for sensing the direction of flow of gas between said flow fields and ambient; and

means for disconnecting the electrical load from the fuel cell stack in the event that there is no flow of gas from said flow fields toward ambient.

3. Apparatus according to claim 2 wherein said means for sensing the direction of flow comprises a flap disposed within the flow of gas which will operate a switch when the flow of gas is toward ambient.